NATIONAL HISTORIC LANDMARK THEME: Travel & Communications

Form 10-300 (Rev. 6-72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATE: Maryland BA-143
COUNTY: Baltimore
FOR NPS USE ONLY
ENTRY DATE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM

(NATIONAL HISTORIC LANDMARKS)

(Type all entries - complete applicable sections)

SEE INSTRUCTIONS

1. NAME

COMMON: Thomas Viaduct

AND/OR HISTORIC: Thomas Viaduct

2. LOCATION

STREET AND NUMBER: River Road C&O-B&O Railroad where it crosses the Patapsco River, 2200 feet northwest of U.S. Route 95.

CITY OR TOWN: Relay

CONGRESSIONAL DISTRICT: 7th

STATE: Maryland 21228 — CODE: 24

COUNTY: Baltimore — CODE: 005

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☐ Building ☐ Site ☒ Structure ☐ Object	☐ Public ☒ Private ☐ Both	Public Acquisition: ☐ In Process ☐ Being Considered	☒ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☐ Restricted ☒ Unrestricted ☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☒ Other (Specify) Viaduct	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: President, Mr. John Hanifin, Chesapeake & Ohio--Baltimore & Ohio Railroad.

STREET AND NUMBER: 2 North Charles Street

CITY OR TOWN: Baltimore — STATE: Maryland — CODE: 24

STATE: Maryland

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Howard County Court House--Clerk of Circuit Court

STREET AND NUMBER: 8360 Court Avenue

CITY OR TOWN: Ellicott City — STATE: Maryland — CODE: 24

COUNTY: Howard

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: Historic American Building Survey (4 photos)

DATE OF SURVEY: 1936 ☒ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS: Library of Congress/Annex

STREET AND NUMBER: Division of Prints and Photographs

CITY OR TOWN: Washington — STATE: D.C. — CODE: 11

FOR NPS USE ONLY
ENTRY NUMBER
DATE

Form 10-300a
(July 1969)

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(Continuation Sheet)

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6. Representation (1)

Historic American Building Survey -- large property file, data sheets--photographs.

7. DESCRIPTION

CONDITION	(Check One)					
	☒ Excellent	☐ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL *(If known)* PHYSICAL APPEARANCE

Constructed of local granite, the Thomas Viaduct has proven to be a lasting tribute to its designer, Benjamin H. Latrobe. The viaduct is 612 feet in length formed of eight semicircular arch spans varying in length from 58 feet 5 inches to 58 feet, 10-1/2 inches. Because of the route alignment at the time of construction, the structure was built on a four degree curve and stands 59 feet above the river. The floor is 26-feet wide, broad enough to hold a double track. In addition to the track, a wooden-floored walkway, 4-feet in width and supported by cast-iron brackets, is located on the deck of the viaduct. To aid pedestrains, ornamental cast iron railings were erected upon the outermost edge of the walkway. The granite is ashlar, roughly squared and dressed, laid in cement mortar, with openings at the crown of each arch. Pilasters, made of the same material, run from the top of each pier to the base. Crude in execution, they visually support the massive form of the viaduct while enhancing the harmonious proportion and inherent grace of the Roman arches. The structure contains 24,476 cubic yards of stone and cost $142,236.51, to build. To counteract deterioration, the viaduct underwent repairs in 1938, performed by the Baltimore and Ohio Maintenance of Way Department. The work consisted mainly of improvements for drainage and the application of a grout mixture to the stone spandrel filling. At an unknown date railing blocks were removed from the north side of the deck and a bracketed walkway added, giving more lateral clearance. Thomas Viaduct is in excellent condition and has been in continuous service since its construction in 1835.

Thomas Viaduct is located on the Chesapeake and Ohio--Baltimore and Ohio Railroad at the point where it crosses the Patapsco River. This is approximately 2200 feet northwest of Interstate 95 at the point where it crosses the tracks of the C&O-B&O Railroad.

The Thomas Viaduct exists today in an area heavily built up with major highways extending from Baltimore to Washington. A modern road bridge towers above the viaduct on the south and tends to diminish the massive construction of the earlier structure. Because of existing intrusions the landmark boundary is drawn only to protect the structure itself and its approaches, a distance of 50-feet from each end of the Thomas Viaduct along the tracks of the railroad, including the railroad right of way property and the McCartney monument.

SEE INSTRUCTIONS

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☐ 20th Century
☐ 15th Century	☐ 17th Century	☒ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)* 1835

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☒ Engineering	☐ Religion/Philosophy	☐ Other *(Specify)*
☐ Historic	☐ Industry	☐ Science	
☐ Agriculture	☐ Invention	☐ Sculpture	
☐ Architecture	☐ Landscape Architecture	☐ Social/Humanitarian	
☐ Art	☐ Literature	☐ Theater	
☐ Commerce	☐ Military	☒ Transportation	
☐ Communications	☐ Music		
☐ Conservation			

STATEMENT OF SIGNIFICANCE

Still in use today, the Thomas Viaduct, located on the Chesapeake and Ohio-Baltimore and Ohio Railroad line at the point where it crosses the Patapsco River, is the world's oldest multiple stone arched railroad bridge as well as America's earliest notable example of railroad bridge construction. Designed in 1835 by Benjamin H. Latrobe, a civil engineer and son of the architect of the same name, the bridge was, for its day, of massive size, the largest in the country, dwarfing all contemporary masonry works and marking the real beginning of the major railway structure in America. Still impressive today, the structure has required no major repairs or changes in its many years of service.

The original route of the Baltimore and Ohio Railroad left Baltimore City near its southwest corner, following the Patapsco River to Ellicott's Mills on its way westward. Shortly after this portion of the main stem had been in operation it was realized that a rail connection with the Nation's Capital was essential to the company's success, and construction was begun in 1832. Where the new line branched from the old at Relay, site of a former postroad hotel and changing point for stage horses, a crossing of the Patapsco River was necessary. The Patapsco span, designed by Benjamin H. Latrobe in 1835, was a structure remarkable in every aspect of its conception. In laying out the route, Latrobe had to provide for passage over the river which flowed through a deep ravine between Relay and Elkridge Landing. The route alignment required that the viaduct follow a four degree curve, giving rise to almost unprecedented problems of design and construction. The present structure illustrates his answer to the problem. Latrobe's design was executed by John McCartney, contractor, under the direction of Jonathan Knight, principal assistant engineer and Caspar Wever, superintendent of construction. When the structure was finished a 15-foot monument with the names of the builder, directors of the railroad, the architect, engineer, and others associated with the viaduct was constructed by the builder, John McCartney.

Until after the Civil War the B&O was the only railroad into Washington and was used by Federal forces for supply trains, with heavy guards stationed along the viaduct. The Baltimore and Ohio named the bridge the "Thomas Viaduct" after the company's president, Philip E. Thomas, illustrating the company's confidence in the structure. Some skeptical engineers however, thinking the bridge would collapse under its own weight,

(continued)

SEE INSTRUCTIONS

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8. Statement of Significance: (1) Thomas Viaduct

nicknamed the viaduct "Latrobe's Folly." The error in these predictions is proven by the bridge itself. Since August 25, 1835, the viaduct has remained in constant service, carrying every type of locomotive used in the B&O's long history from the original six-ton engines of the period to the 300-ton engines of today, with no alteration or major repair. All main line traffic between Baltimore and the west passed over the Thomas Viaduct until about 1870, when the main line was rerouted along the Washington Branch.

GPO 921-724

9. MAJOR BIBLIOGRAPHICAL REFERENCES

"The Oldest Stone-Arch Railroad Bridge in the World: The Thomas Viaduct, Across the Patapsco River," The Scientific Monthly, XLI (October 1935), 381-383.

Hungerford, Edward , The Story of the Baltimore and Ohio Railroad, New York, 1928, vol. I, pp. 153, 166-67, 171-72.

Vogel, R. M., Unpublished report, Historic American Engineering Record, Office of Archeology and Historic Preservation, National Park Service, Department of the Interior, Washington, D.C., 1965.

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY			OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES	
CORNER	LATITUDE	LONGITUDE		[redacted]	[redacted]
	Degrees Minutes Seconds	Degrees Minutes Seconds			
NW	° ' "	° ' "			
NE	° ' "	° ' "		18.352080	.4342590
SE	° ' "	° ' "			
SW	° ' "	° ' "			

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: .5

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE
Maryland	24	Howard County	027
Maryland	24	Baltimore County	005

SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE: Patricia Heintelman, Architectural Historian, Landmarks Review Project; original form prepared by S. Sydney Bradford, 1963.

ORGANIZATION: Historic Sites Survey, National Park Service

DATE: 7/30/74

STREET AND NUMBER: 1100 L Street NW

CITY OR TOWN: Washington

STATE: D.C.

CODE:

12. STATE LIAISON OFFICER CERTIFICATION

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National ☐ State ☐ Local ☐

Name (NATIONAL HISTORIC LANDMARKS)

Title

Date (NATIONAL HISTORIC LANDMARKS)

NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

(NATIONAL HISTORIC LANDMARKS)

Director, Office of Archeology and Historic Preservation

Date (NATIONAL HISTORIC LANDMARKS)

ATTEST:

Keeper of The National Register

Date

Landmark Designated: Jan. 1964 date

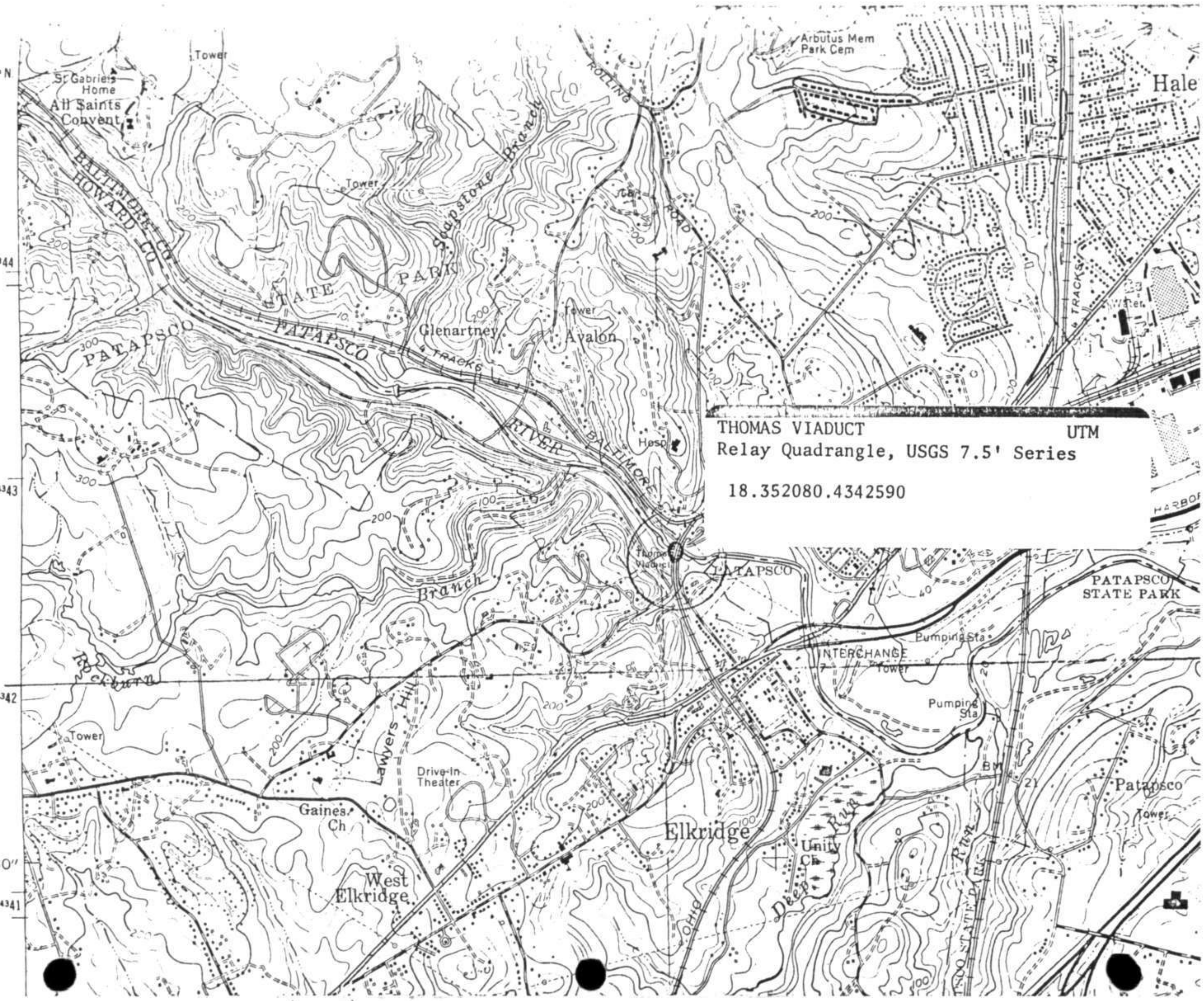
Boundary Certified: Cornelius W Heine 6-19-75

Chief, Hist. & Arch. Surveys date

Boundary Affirmed: [signature] 4/9/75

Director, OAHP date

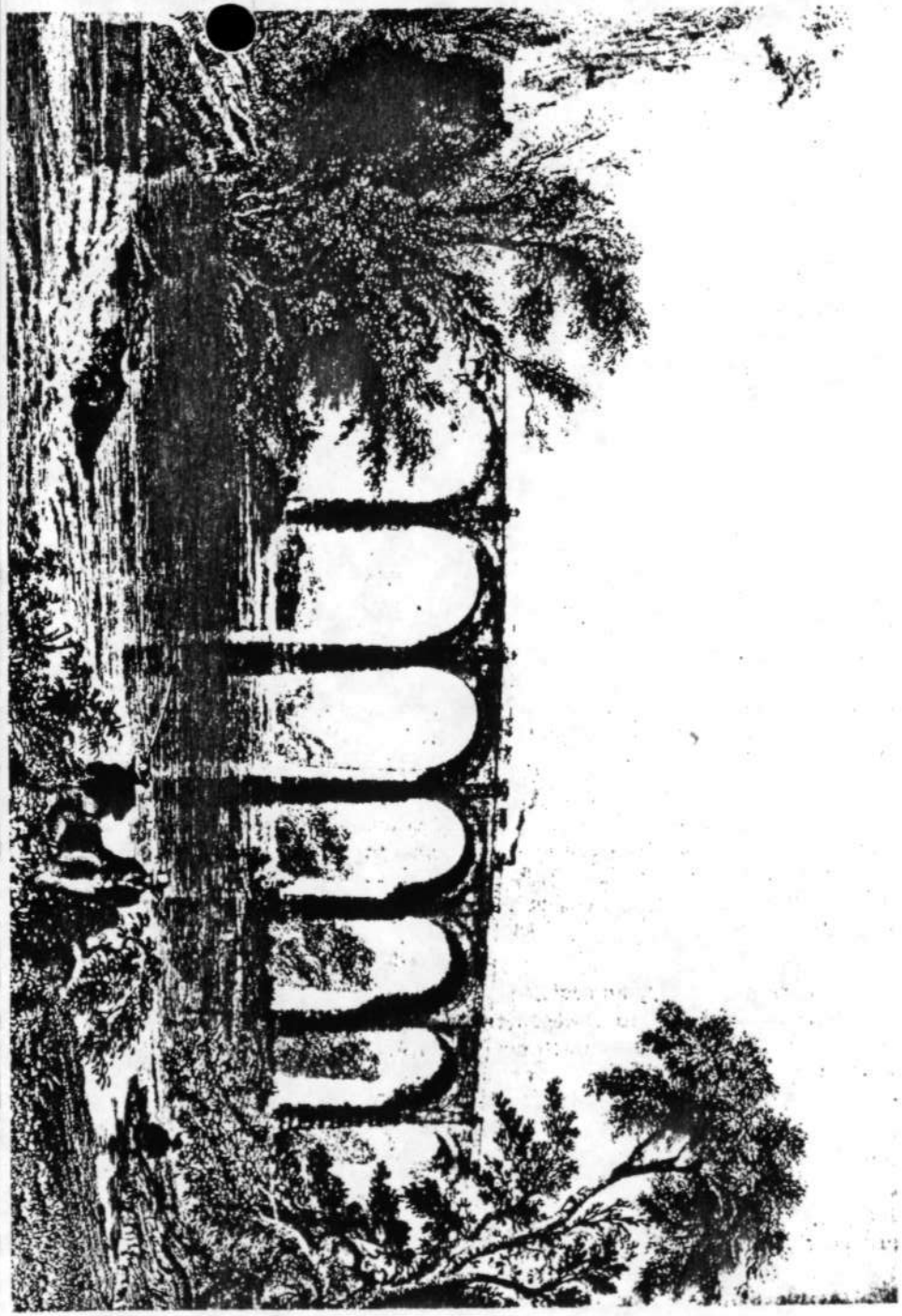
HO-80



THOMAS VIADUCT UTM

Relay Quadrangle, USGS 7.5' Series

18.352080.4342590



An early engraving of the Thomas Viaduct looking down river from the Howard County shore. Note monument to left of bridge.

THE BRIDGE THAT COULDN'T BE BUILT

Phillip Thomas, President of the Baltimore and Ohio Railroad, secured the talents of a famous Baltimorean, Benjamin Latrobe, to design a bridge that would carry the trains over the gorge. John McCartney, an engineer from Ohio, was given the job of constructing it. Many people said that such a bridge could never be built; and, even if it were, it would surely collapse under its own weight.

Construction was begun on July 4, 1832, and took three years to complete. When finished, the bridge stretched in a four degree arc from the Baltimore County side of the river to the Howard County bank, a distance of 612 feet.

Eight elliptical arches measuring 57 feet 10½ inches to 58 feet 4½ inches supported the 60 foot high structure. The height of the arches served two purposes. First, they were of sufficient height to allow ships to pass freely under the bridge. The Patapsco River remained navigable until the flood of 1868 which reduced river traffic to barges and light crafts. Second, the wide openings would permit flood waters to rush through without destroying the bridge. The bridge was 26 feet wide, which allowed enough room for two tracts to be laid. The bridge was constructed of granite block quarried in Maryland. A total of 24,476 cubic yards of masonry was required. The final cost of the construction was $142,236.51. A shrewd investment when one considers the fact that the bridge has withstood 140 years of constant use, five major floods, and numerous ice jams without any major repairs whatsoever!

The bridge was named the Thomas Viaduct in honor of Phillip Thomas, the first president of the Baltimore and Ohio Railroad, and the man who initiated its construction. Before opening day ceremonies on July 4, 1835, it was known as Latrobe's Folley. When the first six and one-half ton engine, the Atlantic, pulled onto the bridge, many people closed their eyes for fear that all would fall into the river. When a second train successfully mounted the span, a great roar went up from the crowd that lined both sides of the river. Latrobe's Folley had become the eighth wonder of the world! Legend has it that McCartney was so excited when the bridge was opened that he had some of his workmen kneel on the ground while he baptized them with a bottle of liquor. It is a fact that when construction was completed, McCartney erected his own monument at the north end of the bridge, listing his name and the names of government and railroad officials connected with the project. Like the bridge, the monument still stands today.

When the new line first opened, it ran only as far as Bladensburg, Maryland. Passengers completed their journey by stagecoach until tracks could be laid into the Capitol. Relay became known as Washington Junction, a name that did not last. The Thomas Viaduct was not only a major contribution to railroad development in America, but it also supplied the only connection from the north into the Nation's Capitol until well after the Civil War.

On February 14, 1845, James K. Polk of Tennessee became the first president elect to travel by train to his inauguration. President Polk travelled all day by coach from Cumberland to Relay. Two and one-half hours later he was in Washington.

Toomey, Daniel C. 1975 A History of Relay, Maryland, and The Thomas Viaduct.

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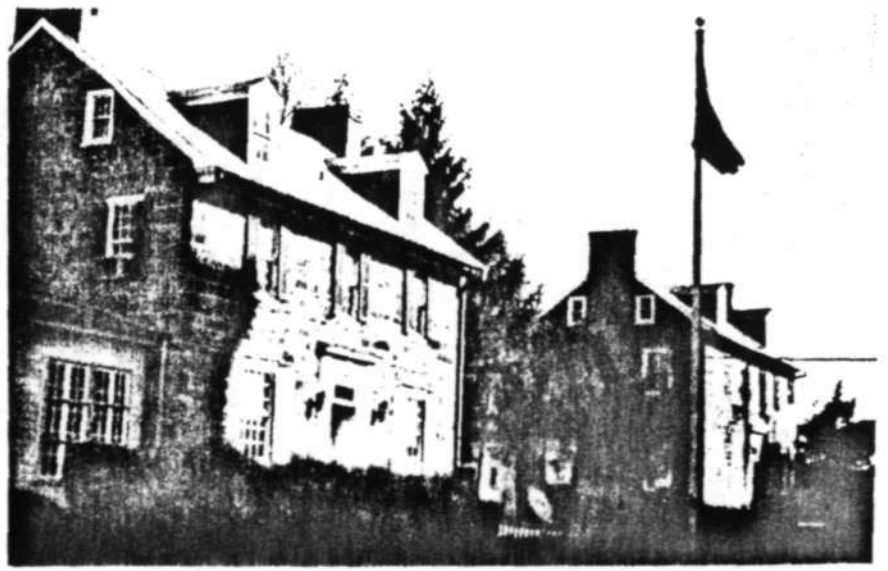
7 THOMAS VIADUCT - 1835 - Relay. Reported to be the world's oldest multiple-arched railroad bridge, built by the Baltimore and Ohio Railroad to span the Patapsco between Relay and Elkridge. Designed by Benjamin H. Latrobe, a Baltimore architect, the bridge is built, on a curve, of huge blocks from the Granite Quarries. Named for Philip E. Thomas, first president of the Baltimore and Ohio. A National Historic Site.

8 ST. TIMOTHY'S CHURCH (PROTESTANT EPISCOPAL) - 1844 - Ingleside Avenue. Of stone, Gothic style, designed by Robert Carey Long at a cost of $10,000, one-half contributed by John Glenn, prominent landowner. Private girl's school, established 1872, continues today, but in another location.

9 OLD SALEM LUTHERAN CHURCH - 1849 - Ingleside Avenue. Founded by early German settlers in the Catonsville area. Sermons and day school conducted in German for many years.

10 MT. de. SALES ACADEMY - 1852 - Edmondson Avenue and Academy Lane. A convent and school for girls, run by the Sisters of the Visitation.

OLD SALEM LUTHERAN CHURCH



ELLICOTT BROTHERS' HOMES

Offutt, E. Frances
1971 Baltimore County Landmarks. Board of Library Trustees for Baltimore County, Maryland.

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Thomas Viaduct

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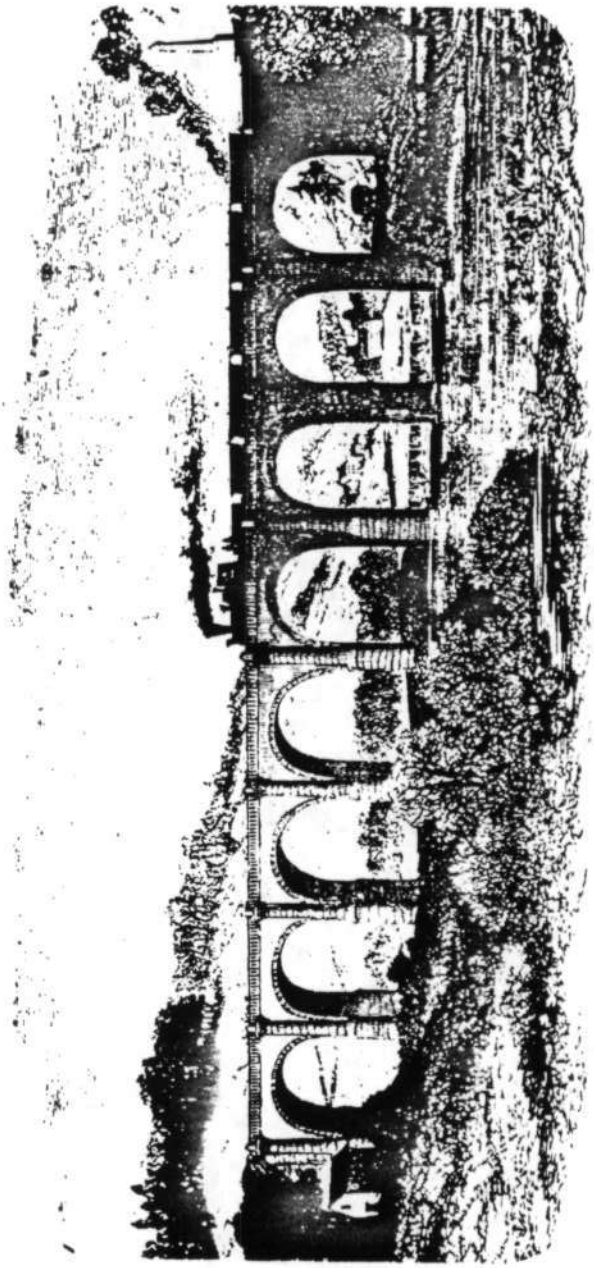
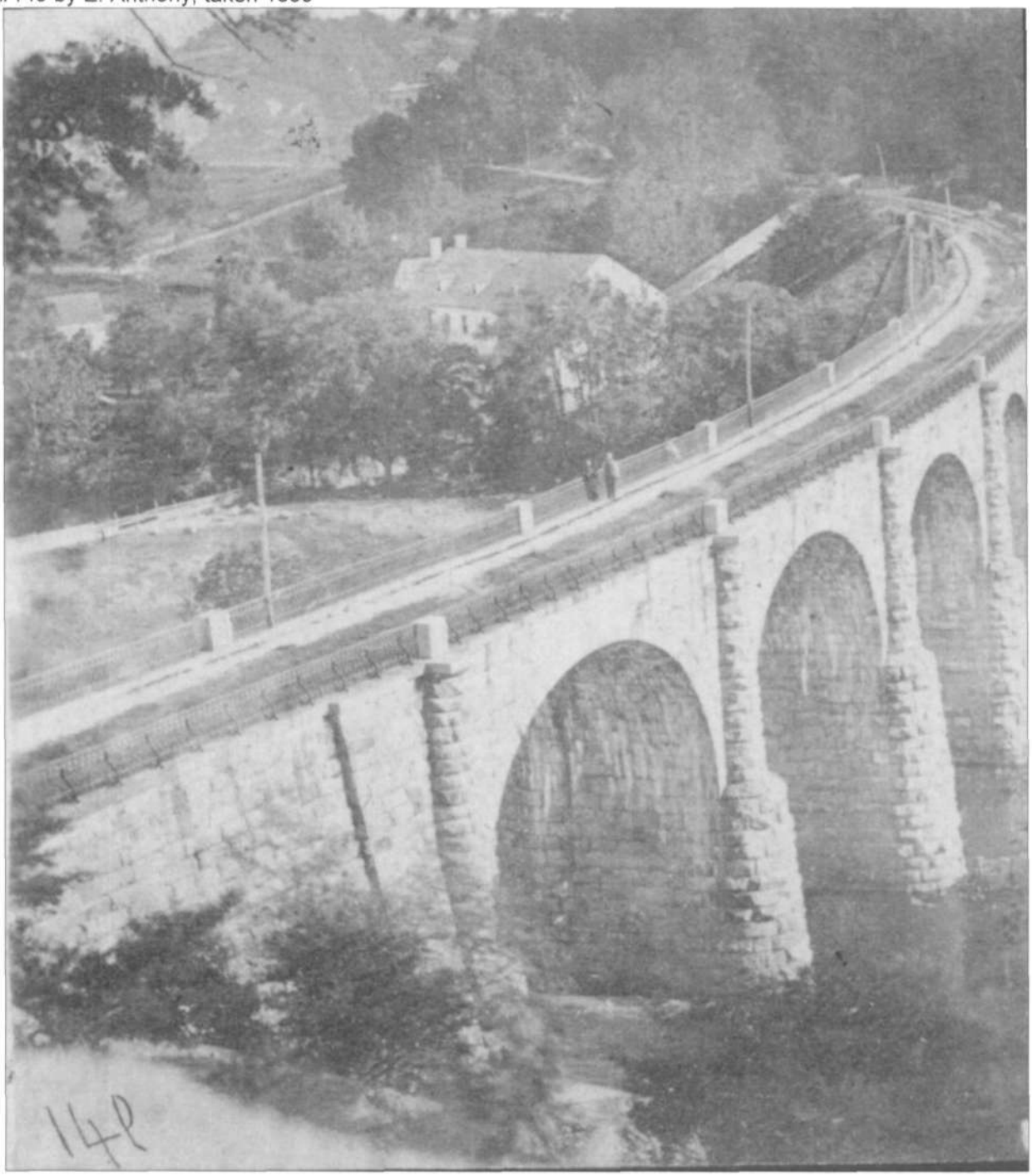


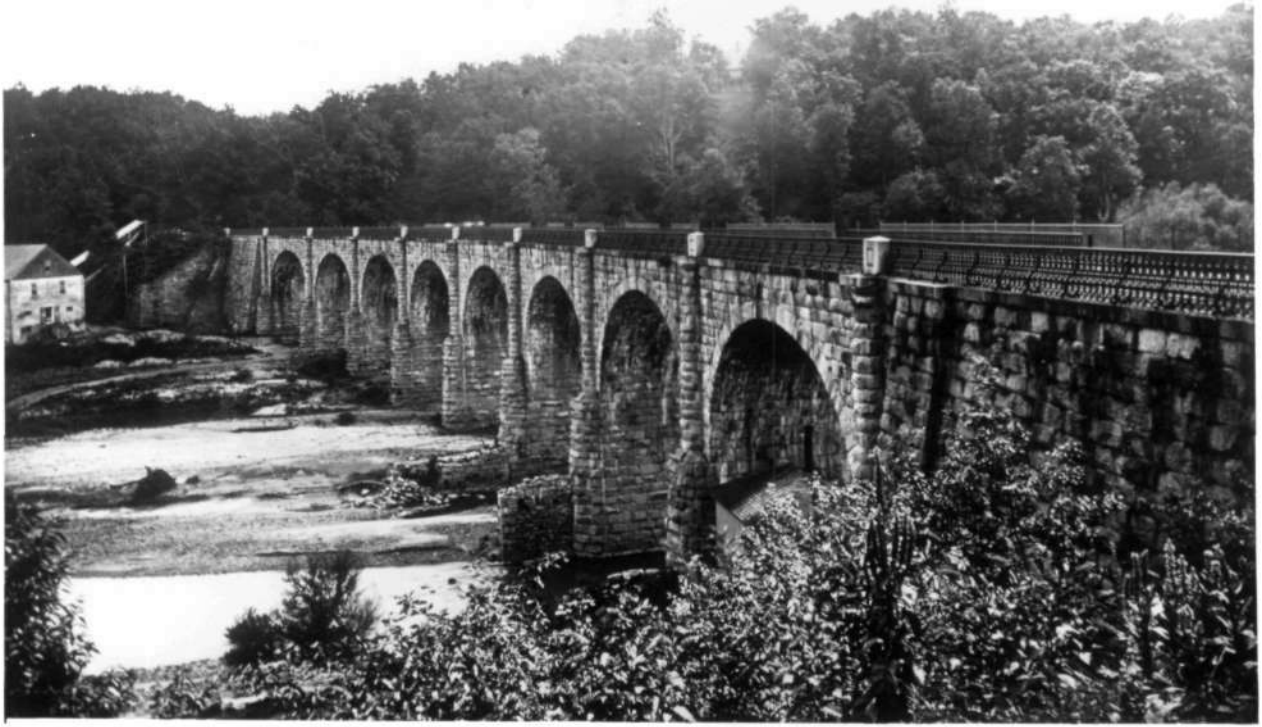
GREAT STONE VIADUCT AT "WASHINGTON JUNCTION,"
BY WHICH THE "WASHINGTON BRANCH" OF THE BALTIMORE & OHIO RAILROAD CROSSES THE PATAPSCO RIVER, 9 MILES FROM BALTIMORE.

THE THOMAS VIADUCT - A NATIONAL HISTORIC SITE IN BALTIMORE COUNTY

Offutt, E. Frances
1971 Baltimore County Landmarks. Board of Library Trustees for Baltimore County, Maryland.

HO-80
Thomas Viaduct
Right half of stereograph labeled, "Thomas Viaduct, built 1835. Used by B&O to cross Patapsco River. #149 by E. Anthony, taken 1859"





THOMAS VIADUCT, HOWARD CTY. HO-80

B&O RR Collection #678